

LANGUAGE LABORATORY SYSTEMS

What is a Language Laboratory System? A language laboratory system is an electronic teaching aid used by language Instructors to supplement classroom training. A Lab consists of a master Instructors control console, and is usually comprised of ten or more student consoles (booths) that either contain an audio amplifier (Level II), a student recorder/reproducer (Level III), or lastly, an audio amplifier and an interactive student controller (Level IV), and a combination headset/microphone unit. Student consoles are usually purchased in multiples of 10 (i.e. 10, 20, 30 positions/Lab). Custom configurations are available to meet the needs of the Country. Level II & III Labs can optionally include an audiovisual accessory package, consisting of a multi-standard (NTSC/PAL/SECAM) videocassette recorder along with two 25-inch and one 14-inch TV receivers for student and Instructor program monitoring.

How does a language laboratory system work? When using a Level II language laboratory system, the Instructor "loads" a cassette tape or audio CD, containing the language lesson material for the day, into the console cassette recorder/reproducer or the audio CD player, if so equipped. Then the Instructor sends the selected program to individual students or groups of students who have been assigned to listen to that particular lesson or lessons. **NOTE:** Up to four (audio) lessons may be distributed simultaneously. The Instructor places the program recorder/reproducer into the play mode and sets the volume level for comfortable listening. The students hear the lesson materials and respond accordingly, hearing their own voices in their headset (side tone). When an AV accessory package is purchased, the Instructor can deliver the selected audio and video program to the 25-inch TV's for student viewing, as well as to the 14-inch TV receiver located at the master console for Instructor viewing. The Instructor can monitor the program audio sound track through the headphones or via the console mounted speaker.

The Level III language laboratory system usage is identical to Level II except the student records, on the student recorder/reproducer, the day's language lesson on the Master track and the student responses on the student track. Only the Instructor can erase the Master track. The student may record the Student track as often as necessary to perfect the lesson. Each time the Student track is re-recorded; it erases all previous student track recordings. Once each student has recorded the responses to the master track, on a separate track, the students can rewind the cassette tape to the beginning and proceed in the "compare" mode of self-study, whereby the student hears the target (master track) instruction followed by his/her response previously recorded. In this mode, each student can work independently (practice), as time allows, improving and perfecting his or her individual responses to the lesson material.

A Level IV language laboratory system consists of a master Instructor's console and any number of student consoles each equipped with a student controller (PC with a CD or DVD player), and a student audio amplifier with headset/microphone units. The student will either be given, or will select from the library, a CD-ROM disk containing the assigned lesson material. The CD-ROM or DVD disc would then be inserted into the tray of the player. Using the keyboard or mouse, the student will interactively practice the lesson, repeating the entire lesson or portions of the lesson until they have perfected it. The Instructor can monitor each student, selectively, during this period.

If the Level IV Lab has been purchased with the optional local area network (LAN) kit, students will have the added capability of interacting with lesson material delivered to the LAN from the Instructor, via the Master Console.

Each Level IV system includes a "video channel", separate from the LAN system. This feature allows the Instructor to deliver "full screen motion video with sound" to any/all students consoles, jitter free, at the ideal rate of 30 (or 25) frames per second which are the worldwide TV scanning formats for all NTSC/PAL/SECAM broadcast signals. CD-ROM Interactive Courseware materials that have been prepared in the AVI format deliver motion pictures at a rate of 25 /30 frames/second. As a result, the AVI format will display video signals in less than "full screen" display and can contain some jitter and ghosting (appears as hesitation) with slight impairment of the program audio signals. AVI programs deliver signals at the approximate rate of 14-15 frames/second.. While the LAN has a multitude of valuable features in a networked system, motion video and sound (when compared to still pictures and text) arrive at each students PC monitor containing visibly impaired video (jitter, ghosting, etc.) and sampled (broken) sound tracks. Thus,

the separate "video channel" is a key element within a Level IV Learning System; to eliminate the unacceptable motion signals delivered via conventional LAN connections. When a LAN kit is purchased, it contains an ONLINE WWW/Internet router and E-mail server. Administrative software furnished allows the Instructor to assign each student a logon name and password for accessing the Internet (such as for Distance Learning, etc.) and receive WEB E-mail. Each ONLINE package, when optionally selected, includes "WEB Filtering" software that prevents students from accessing unauthorized (x-rated, etc.) websites. Through the administrative software, the Instructor can allow or deny (any/all) students ONLINE access. The filtering software, in conjunction with the Administrative software, makes a permanent record of any/all students attempting to access unauthorized websites, even though their attempts will be denied. Reports of this nature can be collected on a daily, weekly, monthly or quarterly basis, etc., as directed by the Administrator, and they can be printed or E-mailed to training Command officials for proper handling. The telephone connection to the Internet server, and subscribing to a local Internet Service Provider (ISP) are the responsibilities of the host country

What is Level II ("AA" or Audio-Active student participation)? Each Level II laboratory system contains an Instructor's console and a quantity of student consoles (booths). The Instructor's Console (IC), also known as the Master Control Console, contains up to four audio cassette program recorder/reproducers or audio CD players, along with all of the required electronics/power supplies for the distribution of audio signals, as well as for controlling all student and classroom laboratory functions. In the Level II type laboratory, each student has a console (booth), a student audio-active amplifier with call button, volume control, and a VU meter, and a headset/microphone unit. Students hear the Master program coming from the IC in one element of the headphone unit, and they hear their own response (side-tone) in the other earphone element. The Instructor can record each student on one of the master cassette tape recorders. Students can initiate calls to the Instructor via the momentary push-button switch (CALL) on their audio amplifiers. Full two-way communication is provided within Level II, Level III, and Level IV language laboratory systems.

What is Level III ("AAC" or Audio-Active-Compare student participation)? The Level III laboratory operates identical to the Level II type laboratory as described above, except that each student has a 2-track/2-channel cassette tape recorder/reproducer, which may be remotely controlled from the IC. Program lesson material is available to the students by live voice from the instructor, programs being sent to them from the IC cassette recorder/reproducers and/or VHS player, or pre-recorded (Master track only) tapes which are inserted in the cassette compartment of each of the

student tape recorders. Whatever the technique used for sending programs to students, each student responds via their microphone and their voice is recorded on the second (Student) track of the cassette tape, continuing until the lesson material has ended. As time allows, each student can take control of their cassette recorder/reproducer and rewind/replay and re-record as often as desired, in order to achieve lesson proficiency. Playback is performed in a serial format so that the student first hears the Master program, then their response.

The current language course material furnished by Defense Language Institute English Language Center (DLIELC), Lackland AFB, TX, **does not** require the use of a Level III laboratory. However, it should be noted that **only Level III and Level IV Systems** allow for independent study, by the students, when authorized by the Instructor.

What is Level IV ("AAI" or Audio-Active-Interactive student participation)? The Level IV laboratory operates identical to the Level II (AA) type laboratory. In addition, the Level IV is computer-based, interactive language laboratory system which delivers a full range of software formats such as audio cassettes, audio CD's, audio-video cassettes (VHS), and CD-ROM multi-media program formats. The Level IV laboratory contains a fully equipped, personal computer (PC) at the master console and each student console that can provide interactive control of lesson materials, such as CD-ROM American Language Course from DLIELC, with each student participating via keyboard, mouse, and the audio-active amplifier. An optional feature, a local area network (LAN) kit, which provides the networking of the students and the capability to allow the classroom access to the Internet, can be purchased. The telephone connection to the Internet server, and subscribing to a local Internet Service Provider (ISP) are the responsibilities of the host country. The Instructor can selectively monitor each student's audio and visual channels, via the Master

Control Panel, to evaluate how they have progressed through the program material/instruction. All other standard language laboratory functions are provided including full two-way communication between each student and the instructor. Since Level IV type systems can vary widely depending on customer needs and/or budget, it is best to contact the following individuals for system configuration/pricing. Mr. Robert (Bob) Koons, USACECOM, Ft. Huachuca, AZ, commercial phone (520) 538-6744, DSN: 879-6744, FAX 8799, E-mail: koonsr@hqisec.army.mil; or, Ms. Lucinda (Lu) McAfee, USACECOM, Ft Monmouth, NJ; commercial phone (732) 532-8619, DSN: 992-8819, Fax 6874, E-mail <mailto:Lucinde.McAfee@mail1.monmouth.army.mil>.

What else do I need to know about language laboratory systems?

1. The American Language Course (ALC) material of any type or format, textbooks, and software training materials are purchased from the Defense Language Institute English Language Center, Lackland AFB, TX. Course material **does not** come with the language labs. Allow ample time, when ordering ALC materials from DLIELC, so that all materials arrive in-country prior to the LLIT's arrival.

2. Classroom chairs and Instructor's console platform (*elevates the Instructor above the class*) **are not** included and should be obtained from a local (*in country*) source of supply.

3. Level II and Level III language laboratory systems **cannot** be upgraded to Level IV at a later date.

4. Level II and Level III student stations **can** be intermixed; Level II student stations **can** be upgraded to Level III.

5. You can purchase a Level IV laboratory system with mixed capability, i.e., some Level IV student stations and some Level II stations. The Level II student positions **cannot** be upgraded to Level IV unless Level IV furniture and electronics were ordered with the original lab. When choosing to order a mixed Level IV System (i.e., 10-Position of Level IV and 20-Positions of Level II, for example) you must order a "**Basic Level IV System**" and add the Level II student stations as required, not the other way around. In other words, in order to obtain the required features for Level IV interaction with students, you first need to have a Level IV Master Console. There is a major difference between the Level II/III and Level IV Consoles. Level II/III Master Consoles cannot be field retrofitted for upgrading to Level IV operation.

6. To take advantage of the DLIELC produced and marketed VHS videotapes, which support their English language training materials, we recommend **all** Level II and III laboratory systems be purchased with the optional TV/VHS package. This package consists of a multi-sync VHS recorder/reproducer, and two large-screen TVs mounted on roll-around carts. This permits viewing by the entire class. A small-screen TV is contained within the Master console for video program viewing by the Instructor. The Level IV labs have this capability built into the system. The video is viewed on the student PCs.

7. Language laboratory systems come with a one-year initial supply of spare parts, an installation kit, accessory kit, and limited tools and test equipment to perform maintenance on the lab.

Which language laboratory system is best for my training requirements? This determination should be made in conjunction with an English language training survey performed by the Defense Language Institute English Language Center (DLIELC), Lackland AFB, TX. A technical representative from CECOM should be a member of the team to evaluate the classrooms and available electrical power, and make recommendations concerning the suitability of each facility.

How do I purchase a laboratory system? Language labs may be procured through the FMS process or by using IMET program funds. Letters of request for labs using the FMS method should be processed through the Army. IMET funded labs must be programmed and funded through the U. S. Army Security Assistance Training Field Activity (SATFA). The respective CINC must approve the use of IMET funds to procure Level III labs. Level II and IV labs do not need a waiver from the CINC.

How do I get the laboratory system installed? Several technical assistance teams trained in the installation and maintenance of language laboratory systems are available. The requirement for the team's

services may be programmed the same way a lab is programmed and funded. When the SAO has a funded requirement for an installation team, a call-up message (E-mail) should be sent to CECOM at least 60 days in advance of the requested date of installation. Due to manpower constraints within CECOM your installation may be performed by a private contractor. It is important that you communicate all the necessary site information to CECOM, when requested, in order for the installation team to properly prepare for the tasks they must perform when arriving at the remote OCONUS site. Attempt to obtain or prepare a room sketch with dimensions, since this document will allow the installation team to recommend the best classroom layout/configuration upon arrival. Each sketch should show the locations of doors & windows, along with any room obstructions such as columns, window frames or A/C units, etc. In addition, power requirements for Level IV systems are significantly higher than for conventional Level II L. Labs. If you can obtain the electrical characteristics of the existing circuit(s) within the classroom that will contain the new system, please include that information on the room layout sketch. Also include whether local electricians will be available to upgrade the electrical requirements within the classroom, should that become necessary prior to the arrival of the installation team.

Questions? Any questions as to system configuration and pricing of complete laboratory systems, components, spare parts, upgrades of current labs, installation services, or anything else connected with the language lab program, contact the following. Mr. Robert (Bob) Koons, USACECOM, Ft. Huachuca, AZ, commercial phone (520) 538-6744, DSN: 879-6744, FAX 8799, E-mail: koonsr@hqisec.army.mil; or, Ms. Lucinda (Lu) McAfee, USACECOM, Ft Monmouth, NJ; commercial phone (732) 532-8619, DSN: 992-8819, Fax 6874, E-mail <mailto:Lucinde.McAFee@mail1.monmouth.army.mil>.